

North Avenue Corridor Study

Transportation, Energy and
Utilities Committee

August 13, 2014



**PARSONS
BRINCKERHOFF**

Corridor Study Process

- **Project Initiation**
- **Existing Conditions + Issues**
- **Vision + Goals**
- **Options + Concepts**
- **Next Steps**

Corridor Study Origin

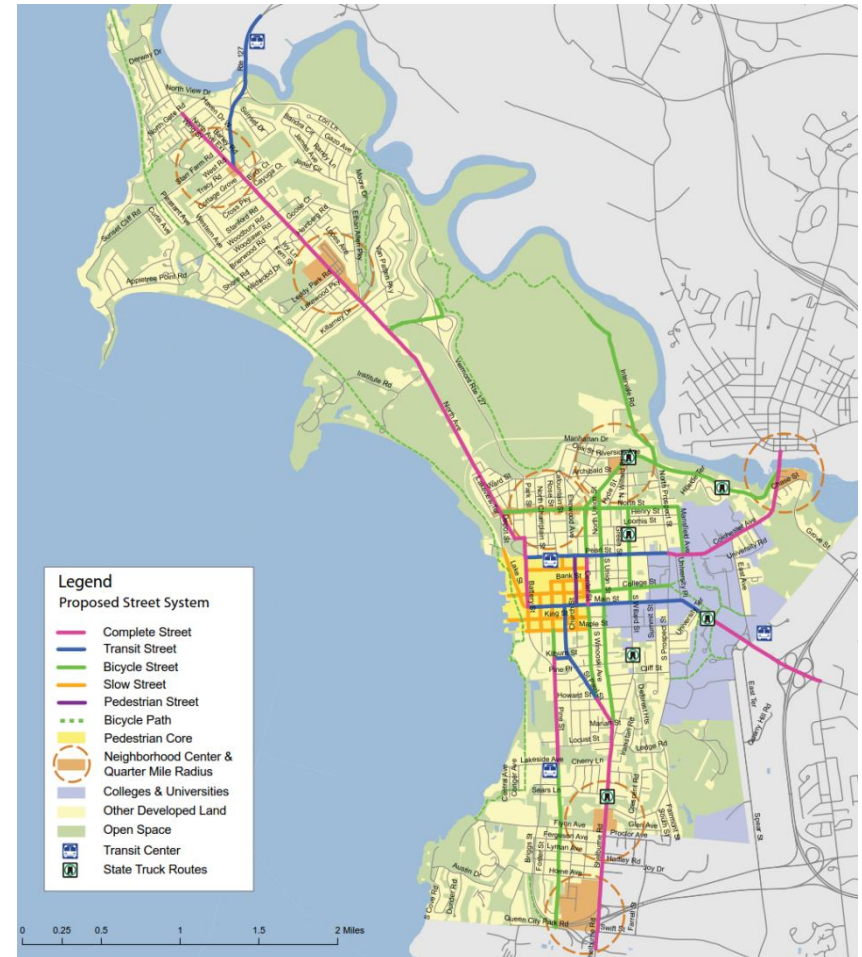
2011 Transportation Plan

“...A shift to a complete streets strategy...

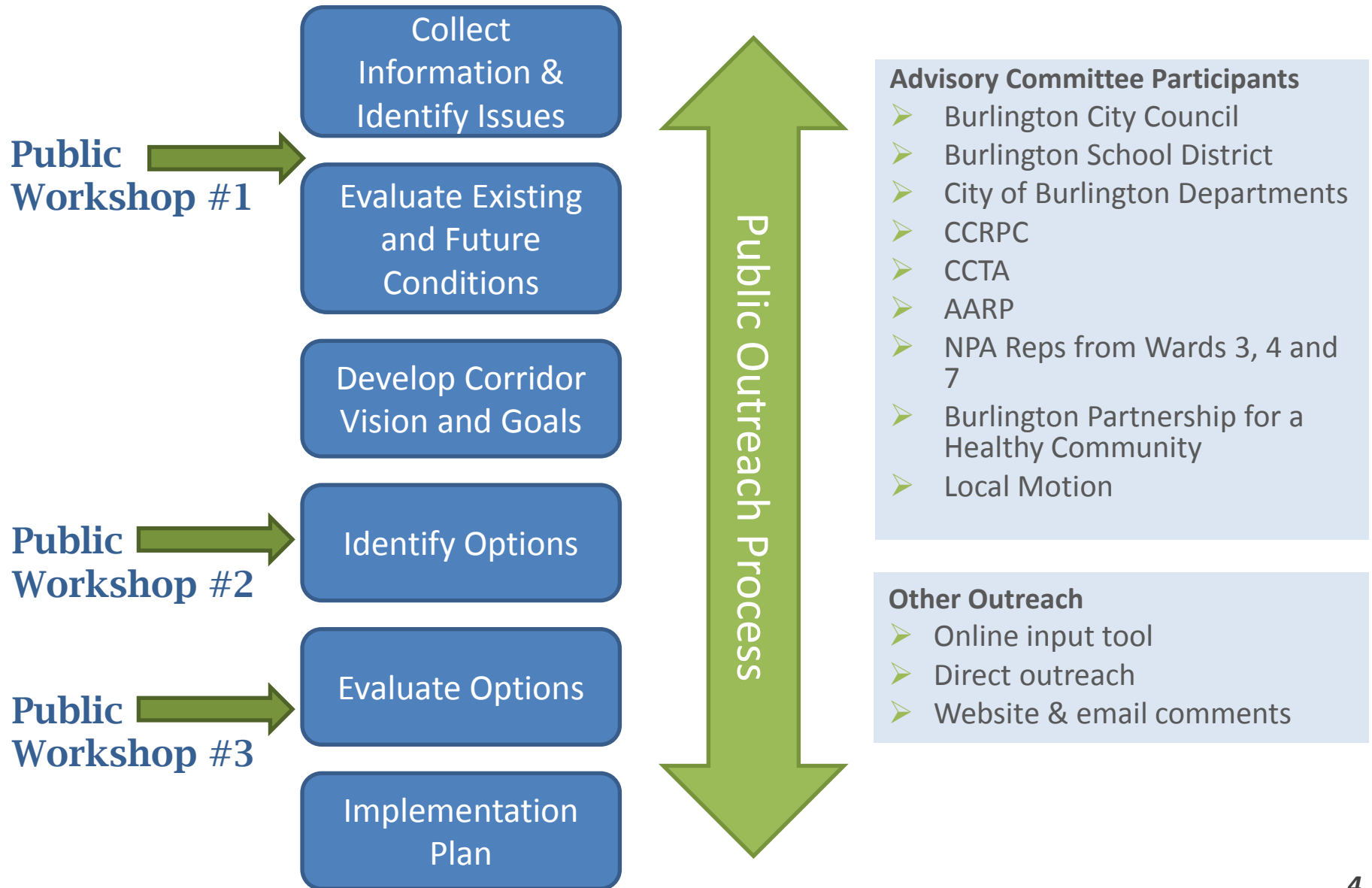
Burlington’s gateway streets must carry all travel modes – cars and trucks, buses, bikes, and pedestrians - because no alternatives exist...

A Complete Street could include: 1) enhanced transit stop; 2) traffic calming by removing a lane of through traffic; 3) short pedestrian crossings; 4) bike lanes; 5) updated utilities and lighting; 6) landscaped median island and turn lane; 7) stormwater planters; and 8) tree belts...

The only essential element of a complete street is accommodating all travel modes safely and efficiently.”



Corridor Study Process



Existing Conditions & Issues

Existing Conditions



**Plattsburg Ave
to Shore Rd**



**Washington St
to North St**

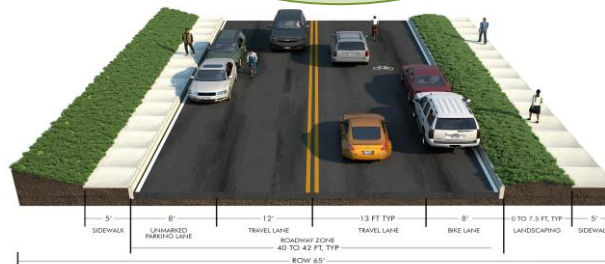


**Shore Rd
to VT 127**

- 66' ROW, but constrained
- Sidewalks throughout, but poor condition and few crossings
- Inconsistent bike facilities, limited connections to paths
- Single family + multi-family + scattered retail + institutions
- Frequent driveways
- CCTA Route 7
- Unclear parking
- Skewed intersections, high-speed right turns



**Institute Rd
to Washington St**



**VT 127
to Institute Rd**

Average Daily Traffic Volumes + Future Growth



High Crash Locations (2006-2010)

Birch Ct to Woodbury Rd

Crashes: 39
PDO: 33 (85%)
Crash Rate: 6.48 per MVM
Actual/Critical Ratio: 1.23
Severity Index: \$21,677

Gosse Ct/Woodlawn Rd to Poirer Pl

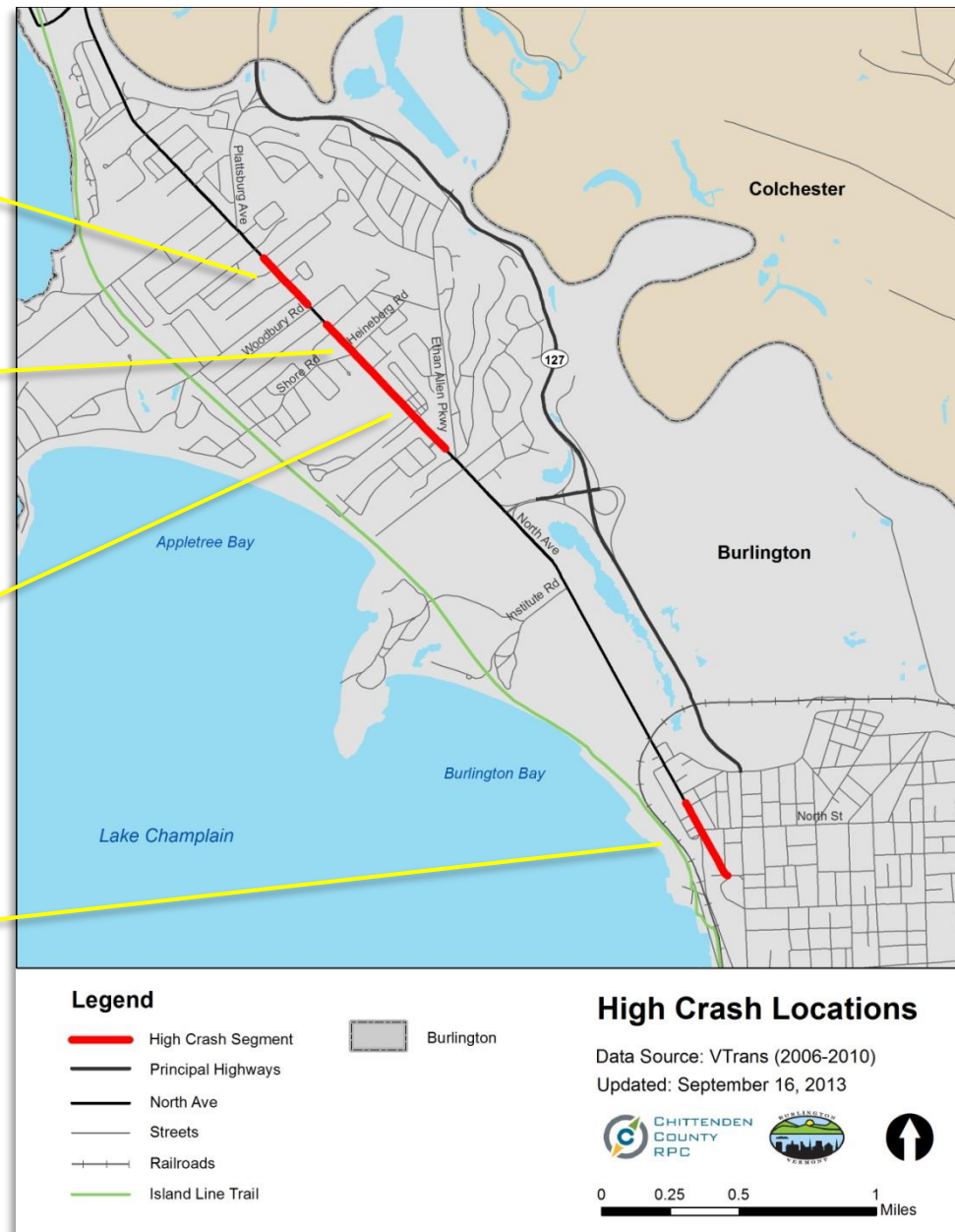
Crashes: 46
PDO: 42 (91%)
Crash Rate: 6.18 per MVM
Actual/Critical Ratio: 1.22
Severity Index: \$13,100

Lakewood Pkwy to Ethan Allen Pkwy

Crashes: 76
PDO: 60 (79%)
Crash Rate: 10.16 per MVM
Actual/Critical Ratio: 2.00
Severity Index: \$41,204

Strong St/Ward St to Sherman St

Crashes: 58
PDO: 4 (93%)
Crash Rate: 9.51 per MVM
Actual/Critical Ratio: 1.81
Severity Index: \$12,107



Vision & Goals

Vision Statement for North Avenue*

North Avenue will continue to serve as the primary transportation corridor connecting Burlington's New North End with the rest of the City.

As the North End's "Main Street," North Avenue will provide for safe, inviting, and convenient travel for all users of all ages and abilities—including motorists, pedestrians, bicyclists, and public transportation riders.

The need to move people through the corridor will be balanced with the need to provide access to homes, businesses, and local institutions.

The corridor will develop into an attractive public space through creative streetscape, signage, and other site design features.

The corridor will become more livable and desirable by promoting social interaction, public health, economic development and environmentally sustainable initiatives.

Goals for North Avenue

- Remake the North Ave corridor into a “Complete Street” that accommodates the safe and efficient travel for all users of all abilities and provides transportation choices.
- Improve safety for all users.
- Provide a range of convenient and efficient travel options and improve multimodal connections.
- Develop strategies that support vibrant and livable neighborhoods in the New North End; enhance the quality of life of residents and visitors; and support sustainable economic growth.

Concept Development

Initial Universe of Improvement Options

■ Intersection treatments

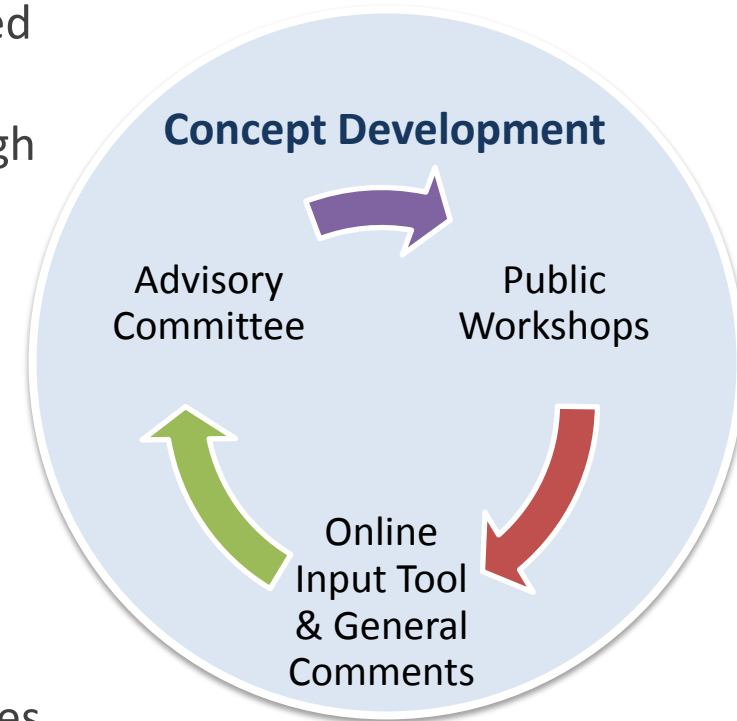
- ❑ Signal improvements, re-alignment, high speed turn elimination, and/or roundabouts
- ❑ Improved pedestrian and bicycle travel through intersections

■ Travel lane, parking and bicycle-related treatments

- ❑ Lane width reductions, travel lane reduction, turn lane creation, and/or lanes for bicycle facilities
- ❑ On-street parking on one side, both sides, and/or removed
- ❑ Designated bike facilities: sharrows / bike lanes (regular, buffered, or protected)

■ Pedestrian facilities

- ❑ Crosswalks, signal improvements, and/or gateway treatments



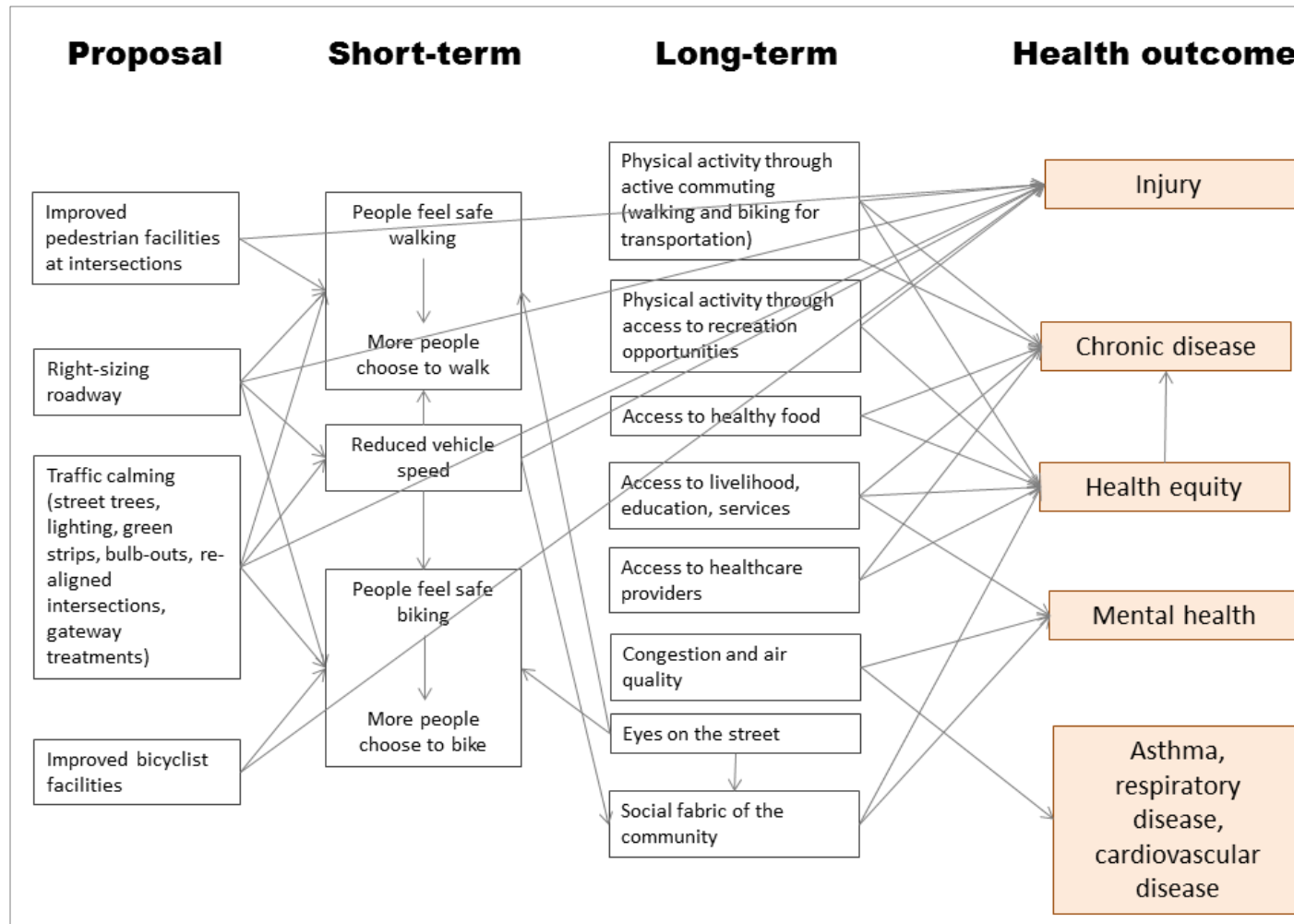
Analysis of Options

- Vision and goals
- Consistency with Burlington's Complete Streets Design Guidelines
- Impacts on safety for all users
- Multi-modal connectivity and transportation choices
- ROW impacts
- Maintainability

Health Impact Assessment

What are the potential health impacts of proposed changes to North Avenue?

Which proposals have the most potential to improve the health of vulnerable populations?



Short, Medium, & Long Term Implementation

- Short term = minimal design; completion within 1-3 years; basic improvements to advance without additional public process (e.g. signal timing, ADA improvements)
- Medium term = design needed; completion within 3-7 years; public process included in design process
- Long term = evaluation, scoping and design needed; completion is more than 7 years; robust public involvement

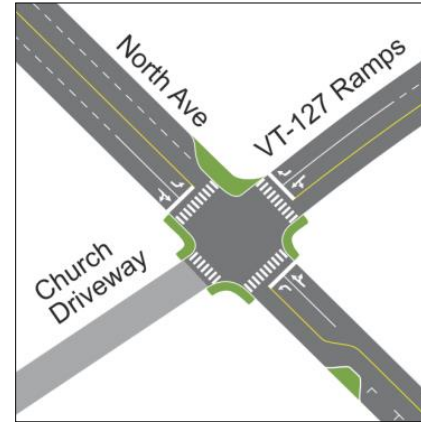
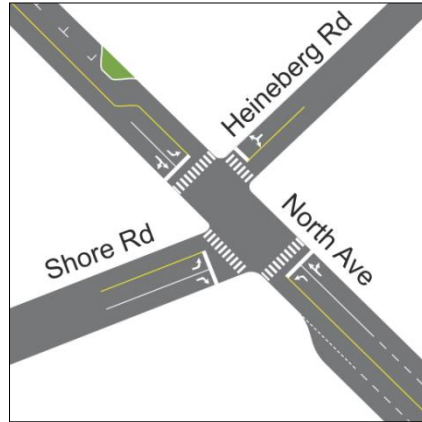
Concept Recommendations

Short-Term Intersection Concepts

- All intersections
 - ADA-compliant curb ramps and crosswalks on all approaches;
 - audible pedestrian countdown timers with a minimum 5-second (push-button) Leading Pedestrian Interval (LPI); and
 - bicycle facilities maintained through intersections (where provided in advance of intersections).
- New crosswalks:
 - Burlington College
 - Gosse Court
 - Killarney Drive / Village Green Drive
 - Green Acres / Cayuga Court

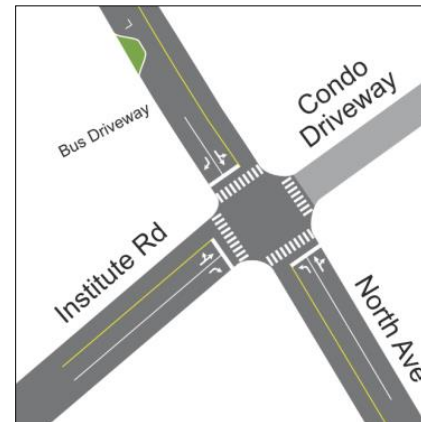
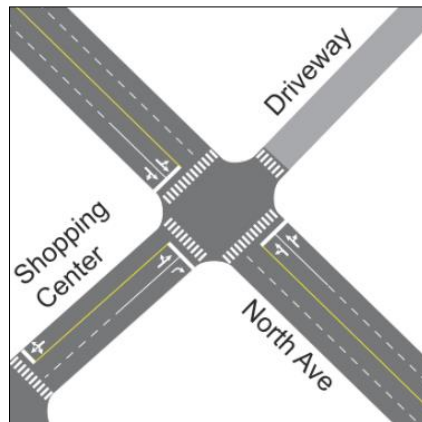
Short-Term Intersection Concepts, cont.

Shore Road:
increase pedestrian
crossing times, split
phasing,
pedestrian-
activated no right
turn on red.



VT 127: remove
high-speed
northbound and
westbound ramps

**Ethan Allen
Shopping Center:**
increase pedestrian
crossing times,
pedestrian-activated
no right turn on red.



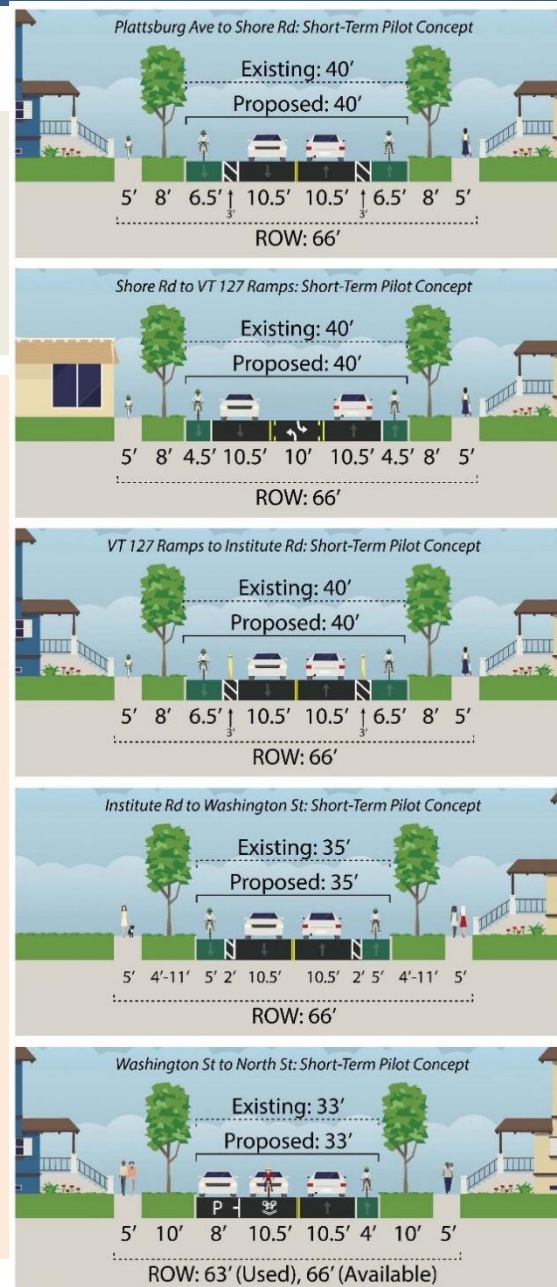
Institute Road:
reduce intersection
footprint, relocate
northbound bus
shelter, realign
southbound
sidewalk,
pedestrian-activated
no right turn on red

Short-Term Cross-Section Concepts

Advisory Committee Recommendation

Differences from Study Team Recommendation

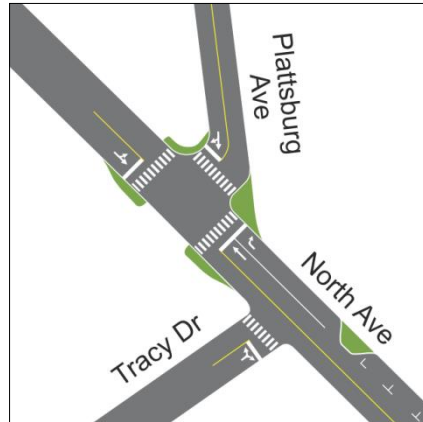
- No parking north of Institute Road
- Protected bike lane timing
- 4- to 3-lane pilot project timing
- 25 mph timing
- 4.5' bike lane in 3-lane section



Medium-Term Intersection Concepts

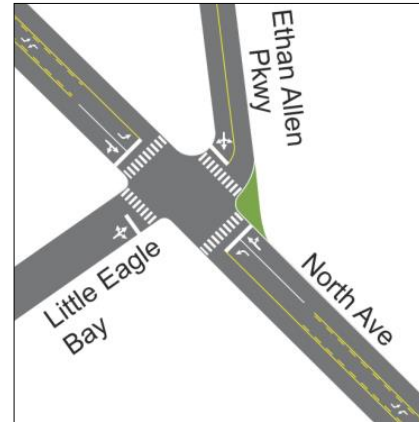
Plattsburg Avenue:

eliminate high-speed northbound right turn, add pedestrian activated no right on red.



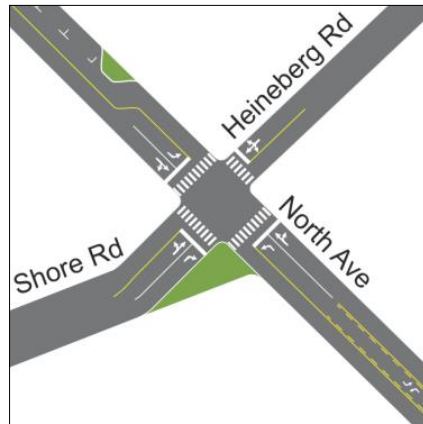
Ethan Allen Parkway:

scoping to relocate Park entrance, add Little Eagle Bay into signal, eliminate high-speed northbound right turn.

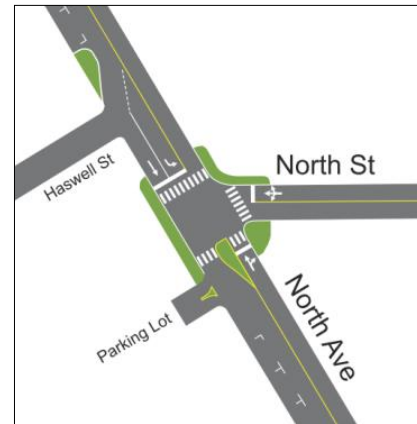


Shore Road:

if ROW is donated or easily acquired, realign Shore Road, keep longer crossing times and pedestrian-activated no right on red.



North Street: parking lot right in / right out or curb cut removal, realign north and south crosswalks, add protected / permitted southbound left turns, pedestrian-activated no right turn on red



Medium-Term crosswalks

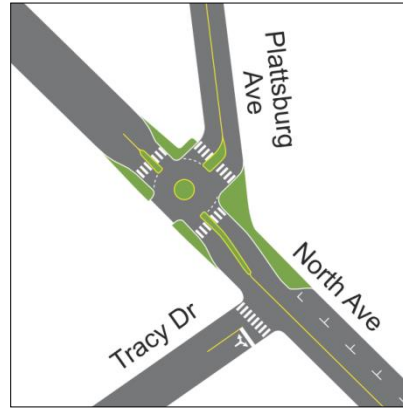
- **Washington Street:** raised intersection
- **Potential crosswalks** for medium-or long-term:
 - Ward Street
 - Saratoga Avenue
 - Poirier Place
 - Loaldo Drive
 - Lakewood Parkway
 - Staniford Road
 - Mid-block between VT 127 and Institute Road
 - Convent Square
 - Canfield Street.

Medium-Term Cross-Section Concepts

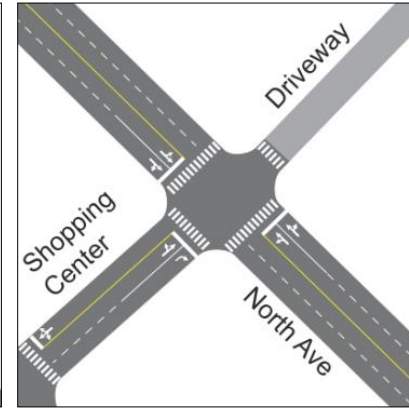
TBD
(potential 4- to 3- lane pilot project)

Long-Term Intersection Concepts

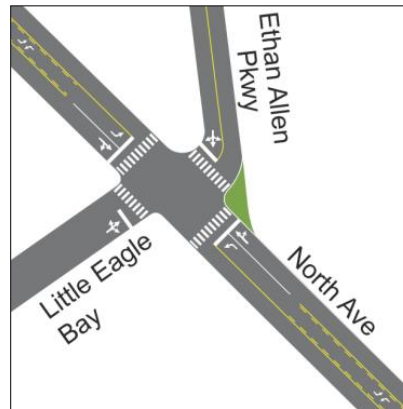
Plattsburg Avenue:
scoping for single-lane mini-roundabout



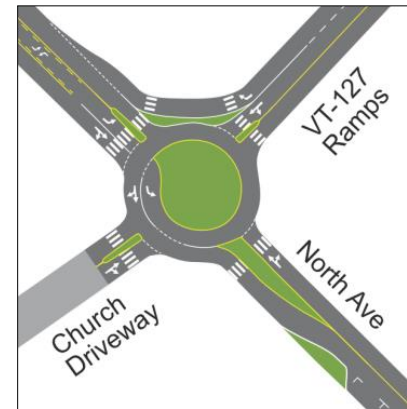
Ethan Allen Shopping Center: reconstruct curb and sidewalk at Farrington's Mobile Home Park and Bamboo Hut



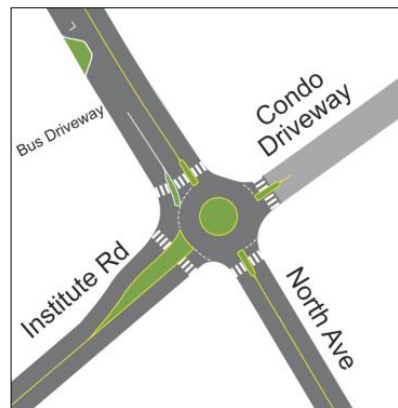
Ethan Allen Parkway: implement scoping study recommendation (signal or roundabout)



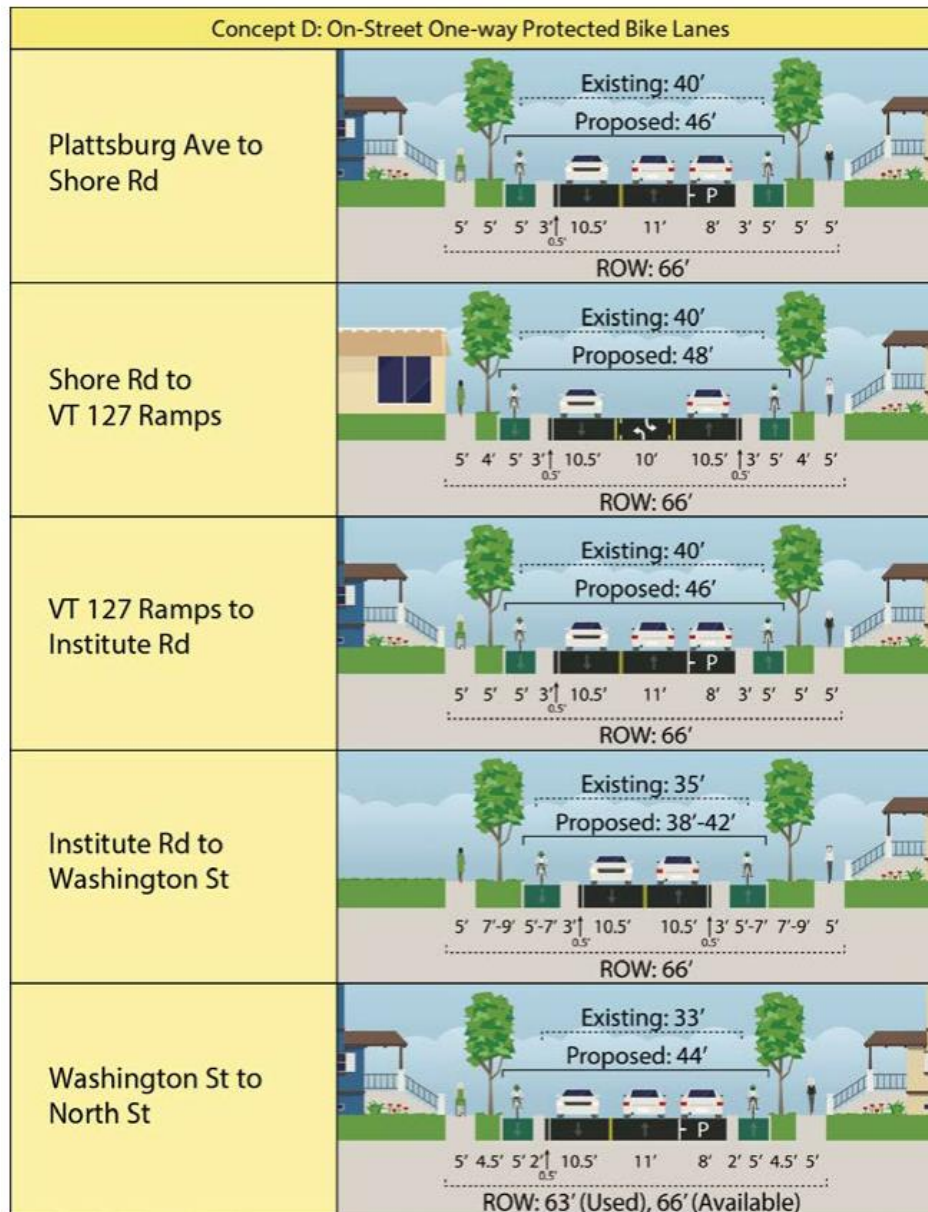
VT 127: scoping study for roundabout



Institute Road:
roundabout, resolve bus driveway



Long-Term Cross Sections Concept



High-Level Cost Estimates

Concept	Estimated Costs
Short Term 4- to 3-lane pilot: Planning + implementation	\$52,000
Short Term crosswalks: Basic - Enhanced	\$25,000 - \$110,000
Short Term intersections: Minor reconstruction	\$70,000
Short Term bike lanes: Buffered / protected lanes	\$60,000
Long Term cross section: On-Street One-Way Protected Bike Lanes	\$7,479,000

Next Steps

SEPTEMBER – TEUC and City Council

- Implementation Plan / Implementation Matrix
 - Chapter 4 of Corridor Plan
- Full Corridor Plan
 - Chapters and Appendices
 - Vision & Goals
 - Existing & Future Conditions
 - Universe of Improvement Options
 - Public Process
 - Development/Evaluation of Alternatives
 - Implementation Plan / Matrix

Questions? Comments?

Thank You!